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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,031	11/06/2003	Hirokatsu Amanuma	107348-00383	7424
4372	7590 05/03/2005		EXAM	INER
ARENT FOX PLLC 1050 CONNECTICUT AVENUE, N.W. SUITE 400			SHRIVER II, JAMES A	
			ART UNIT	PAPER NUMBER
WASHING	ΓON, DC 20036		3618	
			DATE MAILED: 05/03/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	10/702,031					
Office Action Summary	Examiner	AMANUMA ET AL.				
•						
The MAILING DATE of this communication a	J. Allen Shriver	3618				
Period for Reply	opears on the cover sheet with	alle correspondence address				
A SHORTENED STATUTORY PERIOD FOR REP THE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR 1 after SIX (6) MONTHS from the mailing date of this communication If the period for reply specified above is less than thirty (30) days, a re - If NO period for reply is specified above, the maximum statutory perio - Failure to reply within the set or extended period for reply will, by statu Any reply received by the Office later than three months after the mail earned patent term adjustment. See 37 CFR 1.704(b).	. 136(a). In no event, however, may a replication in the statutory minimum of thirty (d will apply and will expire SIX (6) MONTHate, cause the application to become ABA	ly be timely filed  30) days will be considered timely.  IS from the mailing date of this communication.  NDONED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 06	November 2003.					
3) Since this application is in condition for allow	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
	closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
4)⊠ Claim(s) <u>1-12</u> is/are pending in the application.						
	4a) Of the above claim(s) is/are withdrawn from consideration.					
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1-12</u> is/are rejected.	· · · <del>· · · · · · · ·</del>					
7) Claim(s) is/are objected to.						
· · · · _ · · · · · · · · · · · · · ·	Claim(s) are subject to restriction and/or election requirement.					
Application Papers						
9) The specification is objected to by the Examiner.						
•		phiostod to by the Examiner				
	10) The drawing(s) filed on <u>06 November 2003</u> is/are: a) accepted or b) objected to by the Examiner.					
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119		(40( ) ( ) ( )				
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:						
1. ☐ Certified copies of the priority documents have been received.						
<u> </u>		plication No				
<ul><li>2. Certified copies of the priority documents have been received in Application No</li><li>3. Copies of the certified copies of the priority documents have been received in this National Stage</li></ul>						
application from the International Bure	•	seerved in the reducinal elage				
* See the attached detailed Office action for a list of the certified copies not received.						
	·					
Attachment(s)						
1) Notice of References Cited (PTO-892)  4) Interview Summary (PTO-413)						
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/l	Mail Date				
<ol> <li>Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0 Paper No(s)/Mail Date <u>11/6/2003</u>.</li> </ol>	8) 5)  Notice of Info 6)  Other:	rmal Patent Application (PTO-152) .				

#### DETAILED ACTION

### Claim Rejections - 35 USC § 112

- 1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
  - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
- 2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 5 of claim 1, the phrase "so that they are driven or regenerated" is vague and indefinite. First, it is not clear what "they" represents. They could represent the motors/generators or the accumulating means. Second, if "they" represents the motor/generator, Examiner is not sure how the motor/generator is "regenerated".

#### Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 4. Claims 1 and 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Niwa et al. (US Patent 6,454,364 B1). Niwa et al. discloses a hybrid vehicle (See Fig. 1) in which an engine (12) is connected to first driven wheels (26FL,26FR) through a motor/generator (14) and

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a transmission (18), and a second motor/generator (42) is connected to second driven wheels (34RL,34RR), said first and second motors/generators being connected to an accumulating means so that they are driven or regenerated (although the reference is silent as to the battery which stores the electrical energy used and produced by the motor/generators, this element is inherent to the operation of the vehicle), wherein the distribution ratio of braking forces to the first and second motors/generators is controlled to become an ideal distribution ratio corresponding to a longitudinal acceleration of the vehicle during regenerative braking of the vehicle (See column 4, lines 23-27 and column 6, lines 17-21); [claim 8] wherein, during operation of a mechanical brake (44), a braking force for the second driven wheels is determined depending on said ideal distribution ratio is generated by the second motor/generator and the mechanical brake, and a deficiency of the regenerative braking force for the second motor/generator limited by the remaining capacity of the accumulating means is made up by a braking force of the mechanical brake; and [claim 9] wherein, when the braking force of the mechanical brake exceeds a predetermined value, a threshold value for the remaining capacity of the accumulating means permitting the regenerative braking of the second motor/generator is increased.

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## Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niwa et al. (US Patent 6,454,364 B1) in view of Hughes (US Patent 6,724,165 B2). Niwa et al. discloses the hybrid vehicle as set forth above, but does not disclose wherein the regenerative braking of the first and second motors/generators is prohibited during an ABS control. Hughes discloses wherein regenerative braking of the motor/generator is prohibited during an ABS control (See column 1, lines 50-59). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to prohibit the regenerative braking of the motor/generator disclosed in Niwa et al. during an ABS control as taught in Hughes. The motivation for doing so would have been to safely provide braking of the vehicle during an emergency situation.

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7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niwa et al. (US Patent 6,454,364 B1) in view of Kosik et al. (US Patent 6,588,860 B2). Niwa et al. discloses the hybrid vehicle as set forth above including wherein the first and second driven wheels are front and rear wheels, respectively, but does not disclose wherein the distribution ratio of the regenerative braking force to the second motor/generator is increased in accordance with a decrease in a road surface friction coefficient. Kosik et al. discloses wherein the amount of regenerative braking is adjusted according to the temperature (which inherently deduces that the road conditions could have snow and ice when ambient temperature is below the freezing point). Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in this art to reduce the amount of regenerative braking when the road surface friction coefficient decreases due to snow and ice of the road. The motivation for doing so would have been to allow the wheels to rotate freely during these road conditions, because any

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braking force applied to the wheels might cause the wheels to slip on the snow and ice on the

road surface.

Allowable Subject Matter

8. Claims 2-7 and 10 would be allowable if rewritten to overcome the rejection(s) under 35

U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of

the base claim and any intervening claims.

Conclusion

9. The prior art made of record in the accompanying PTO Form 892 and not relied upon is

considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to J. Allen Shriver whose telephone number is (571) 272-6698. The

examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chris P. Ellis can be reached on (571) 272-6914. Any inquiry of a general nature or

relating to the status of this application should be directed to the group receptionist whose

telephone number is (703) 308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop \_\_\_\_\_

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

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Or faxed to: (703) 872-9306 (for formal communications intended for entry). (571) 273-6698 (for informal communications directly to the Examiner).

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thursday, April 28, 2005

Allen Shriver

Examiner

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JAS